ESCAP II: Evaluation of Lack of Balance and Geographic Errors Affecting Person Estimates

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U S C E N S U S B U R E A U

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EXECUTIVE SUMMARY

The Executive Steering Committee for Accuracy and Coverage Evaluation Policy found a potential lack of balance of 2,968,022 persons with a standard error of 734,340 from the Accuracy and Coverage Evaluation. As a result, we performed two additional field operations to determine the origin of the potential lack of balance.

Is there an unexplainable lack of balance in the Targeted Extended Search?

No, the data show that there is a residual lack of balance of -36,068 with a standard error of 838,635. We can conclude that the lack of balance is explainable and due, in large part, to P-sample geocoding error.

What is lack of balance in the Targeted Extended Search?

Balancing comprises two issues:

- A <u>bias</u> in the dual system estimate could have been created if the P-sample and the E-sample did not have the same search area; our match rate and correct enumeration rate could be biased if nonmatches or correct enumerations were in units located outside the surrounding blocks.

- Since the A.C.E. was a random sample and independent from the census, we expected that units should be erroneously included within A.C.E. sample clusters as often as units should be erroneously excluded from A.C.E. sample clusters.   If the search areas for matches to the surrounding blocks and correct enumerations in the surrounding blocks were not equal, the data were coded inconsistently, or there was P-sample geocoding error, <u>the weighted number of matches to surrounding blocks may have not equaled the weighted number of correct enumerations in surrounding blocks</u>, after adjusting for the P-sample coverage.

How can we explain the measured lack of balance?

P-sample Geocoding Error - Of the 10,002,073 person matches to surrounding blocks, we found that for 2,766,934 of those P-sample people, the housing units were not located in the cluster, but were instead physically located in the surrounding blocks. These people matched to the surrounding blocks due to P-sample geocoding error, rather than census geocoding error. If we had not performed a targeted extended search, these people would have created a bias in our dual system estimates.

E-sample Misclassification - In addition to the 7,708,287 E-sample person correct enumerations found in the surrounding blocks, we also found 627,349 additional E-sample persons coded as correct enumerations living in housing units originally classified as within the cluster that were physically located in the surrounding blocks.

Are there potential biases in the dual system estimate?

P-sample Nonmatches Beyond the Surrounding Blocks - Person nonmatches in nonmatched housing units located beyond the surrounding blocks may bias the dual system estimate. We found that 245,926 nonmatched residents were in units located beyond the surrounding blocks with a standard error of 81,513. This error would slightly decrease the dual system estimate.

E-sample Units Beyond the Surrounding Blocks - E-sample correct enumerations in nonmatched housing units located beyond the surrounding blocks may bias the dual system estimate. We found that 195,321 correct enumerations were in units located beyond the surrounding blocks with a standard error of 56,107. This error would slightly decrease the dual system estimate.

What implications do these data have for the total error model?

Some of this data is captured as part of the Measurement Error Reinterview and will be included in the total error model.

What implications do these data have on the adjustment decision?

These data showed that most of the observed lack of balance is explained by P-sample geocoding error and E-sample misclassification of housing units, as we expected, and did not represent a bias in the dual system estimate. The dual system estimate was minimally biased by P-sample nonmatches and E-sample correct enumerations found beyond the surrounding blocks.

1. BACKGROUND

Census 2000 attempted to enumerate each person once at his or her residence on April 1, 2000. The Accuracy and Coverage Evaluation (A.C.E.) measured the net effect of those missed or erroneously enumerated persons in the census. As part of the A.C.E., we implemented the Targeted Extended Search (TES) to account for census geocoding errors in A.C.E. clusters.

If we determined that a cluster had a large amount of census geocoding error based on the housing unit matching, we conducted TES in that cluster. Geocoding error occurred when a housing unit was assigned the incorrect census geography. We conducted TES for two purposes:

- Reduce the variance of the dual system estimates
- Reduce bias from any P-sample listing errors (Navarro and Olson, 2001).

The TES allowed for census geocoding error in A.C.E. clusters by expanding the search area beyond the cluster for certain units. We identified any block touching the A.C.E. cluster at any point (including corner points); these blocks were called the surrounding blocks. We had a P-sample component to the TES and an E-sample component.

- P-sample – We allowed whole households of nonmatched P-sample people in nonmatched housing units to be matched to the surrounding blocks. By allowing the P-sample people to be matched to the surrounding blocks, we reduced the bias caused by any P-sample geocoding error and reduced the overall variance of the dual system estimate due to geocoding error.

- E-sample – We performed a field followup on units determined to be geocoding errors in the initial housing unit matching. Whole households of nonmatched E-sample people who lived in housing units located in the surrounding blocks were counted as correctly enumerated, unless they were duplicated in the surrounding blocks. By allowing the E-sample people to be coded correctly enumerated in the surrounding blocks, we reduced the variance of the dual system estimate due to census geocoding error.

Two types of census geocoding error occurred, error of exclusion and error of inclusion:

- **Error of exclusion** – A census housing unit was considered an error of exclusion if the A.C.E. listed a unit that did not match to a census unit because the census unit was listed outside the cluster. We referred to these units as census misses.

- **Error of inclusion** – A census housing unit was considered an error of inclusion if the census listed a unit within the cluster, but we verified that the unit was physically located outside the cluster. We referred to these units as census geocoding errors.

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We also performed the TES for residual A.C.E. geocoding errors. We conducted the relisting operation after the initial housing unit phase if it contained over 80% A.C.E. geocoding errors. However, there may be residual geocoding errors in the P-sample.

- **A.C.E. Geocoding Error** – An A.C.E. housing unit was considered to be a geocoding error if it was located outside the cluster. We allowed the people in these units to match to the surrounding blocks to prevent overestimating the nonmatch rate.

We determined the number of each type of error in the initial housing unit matching and followup. Based on the results of the initial housing unit matching, we targeted both the cluster and the housing units involved in TES:

- **Cluster Targeting and Sample Selection** – After the initial housing unit matching, we used the results to determine the weighted and unweighted number of errors of exclusion and errors of inclusion. Using these results, we targeted the clusters most likely to have census geocoding errors; hence, we selected the clusters most likely to benefit from TES. We selected clusters with certainty based on weighted numbers of census misses plus census geocoding errors and based on unweighted numbers of census misses plus census geocoding errors. After selecting 1,088 clusters with certainty, we randomly selected 1,089 clusters from a frame of any cluster with a census miss and/or a census geocoding error. We included 62 clusters with certainty that had no housing unit matching to ascertain the geocoding status of the census units in those clusters and we excluded clusters with list/enumerate blocks because housing matching data were not available at the time of the TES sample selection.

- **Address Targeting** – TES included a field followup for census housing units in TES clusters that were census geocoding errors in the initial housing unit matching. During person matching, clerical matchers coded census geocoding errors as in the cluster, in the surrounding blocks or outside the surrounding blocks based on the TES field followup. In addition, we matched P-sample people to the surrounding blocks. However, we targeted the addresses to be coded in the TES operations to maximize our search potential as follows:

  - P-sample–During person matching, we searched the surrounding blocks for people in whole household nonmatches in any P-sample housing unit that was a census miss (potential error of exclusion). We also limited our surrounding block search in urban areas to the block in which a matching census address was found; this allowed us to narrow our search parameters for the people. In rural areas (defined as having at least one non-city-style address), we searched in all surrounding blocks.

  - E-sample–During person matching, we identified E-sample people in whole household nonmatches in any E-sample unit that was a census geocoding error (error of inclusion). We used the results of TES field followup to code the

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people. We performed a duplicate search for any people coded outside the cluster, limiting our search to the block in which the housing unit was located in TES field followup.

We considered the TES to be balanced because the search area for the P-sample surrounding block matches was equal to the extended search area for the E-sample surrounding block correct enumerations and E-sample surrounding block duplicates. Since error of inclusion and error of exclusion, on expectation, should have been equal throughout the country, we should have found the dual system estimates to be unbiased by the TES. For more information, please see Navarro and Olson, 2001.

In a balanced TES, the expected number correct enumerations in the surrounding blocks should equal the matches in surrounding blocks, after adjusting for P-sample coverage (Beaghen 2001) (matches over matches plus correct enumerations).

$$E(CE_{sb}) = E(\frac{1}{P_{cov}} * M_{sb}) \qquad [1]$$

where: CE_{sb}=correct enumerations in surrounding blocks from the original TES sample
P_{cov}=P-sample coverage
M_{sb}=matches in surrounding blocks

Balancing comprises two issues:

- A bias in the dual system estimate (DSE) can be created if the P-sample and the E-sample were not consistently coded; our match rate and correct enumeration rate could be biased if nonmatches or correct enumerations are in units located outside the surrounding blocks.

- Since the A.C.E. was a random sample and independent from the census, we expected that units should be erroneously included within A.C.E. sample clusters as often as units should be erroneously excluded from A.C.E. sample clusters. If the search areas for matches to the surrounding blocks and correct enumerations in the surrounding blocks were not equal, the data were coded inconsistently, or there was P-sample geocoding error, the weighted number of matches to surrounding blocks may not equal the weighted number of correct enumerations in surrounding blocks, after adjusting for the P-sample coverage.

After production matching, we observed that a lack of balance of 2,968,022 people may have existed in the A.C.E. due to the Targeted Extended Search (TES) operations (Beaghen 2001). That is, we had more matches to surrounding blocks than correct enumerations in the surrounding blocks.

Table 1–Lack of Balance Estimates–Production

	P-sample Person Matches to Surrounding Blocks (M_{GI})	E-sample Person Correct Enumerations in Surrounding Blocks (CE_{SB})	P-sample Coverage (P_{cov})	Estimated Lack of Balance		% of M to SB
				Estimate	Std. Err.	
Total	10,002,073	7,708,287	0.9368	2,968,022	734,340	29.67

(Source: Beaghen 2001)

2. METHODS

In order to explain the apparent lack of balance present due to Targeted Extended Search and to explain bias that may have been introduced due to TES, we examined the results of Targeted Extended Search 2 (TES2) and Targeted Extended Search 3 (TES3). Both TES2 and TES3 were field followup and coding operations designed to evaluate the measured lack of balance in the original TES. TES2 followed up E-sample housing units that were coded as erroneous enumerations in the initial housing unit phase to determine if the unit was inside or outside the block cluster and surrounding rings. We also included units with data-defined people that were added to the census after January, 2000 that were determined to be geocoding errors during person followup operations. TES3 followed up other types of units, both P-sample and E-sample, that may have contributed to a lack of balance. Several situations may have existed which could cause lack of balance or bias which should be examined in TES2 or TES3.

How did TES2 help to explain the apparent lack of balance?

During TES2, we performed a field followup on the three types of E-sample units listed below. We used the results of initial housing unit matching and person matching to select our sample.

- Erroneously Enumerated
- Units Added to the DMAF after January, 2000 coded as geocoding errors in TES-eligible clusters (referred to as "DMAF Adds")
- Census Units in List/Enumerate Clusters

Each of these types of units may have been located either in the cluster, surrounding blocks, or beyond the surrounding blocks.

- In the surrounding blocks – If we found a unit in the surrounding blocks during TES2, we increased the number of correctly enumerated people in surrounding blocks from production; therefore, we decreased the estimated difference between matches and correct enumerations in surrounding blocks. If the people were already correct enumerations, then this would not change the production CE rate.
- Beyond the surrounding blocks – If we found a unit beyond the surrounding blocks in TES2, we increased the number of production erroneously enumerated people due to

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geocoding error; the production correct enumeration rate was inflated before the TES2 work.

Chart 1 shows each type of housing unit followed up in TES2 and the effects that the TES2 evaluation could have on the person DSE.

Chart 1–Units in TES2

E-sample HU Match Status	DSE Person Match Status (after matching)	HU Status after TES2		Person Code for TES2 Evaluation	Results	Implications
		In surrounding blocks	Outside surrounding blocks			
Erroneously Enumerated	Correctly Enumerated		T	Geocoding Error	decrease CE/N$_e$ ratio	Bias
		T		Surrounding block correct enumeration	increase CE in surrounding blocks; does not change CE/N$_e$ ratio	Explain Lack of Balance
DMAF adds –TES Eligible Clusters	Unresolved due to geography –imputed at approx. 92% correct		T	Geocoding Error	decrease CE/N$_e$ ratio, by the proportion correct	Bias
		T		Surrounding block correct enumeration	increase CE in surrounding blocks by the proportion correct	Explain Lack of Balance
GE units in List/ Enumerate Clusters	Coded GE		T	Geocoding Error	no change	n/a
		T		Surrounding block correct enumeration	increase CE in surrounding blocks and CE/N$_e$ ratio	Explain Lack of Balance and Bias

How did TES3 help to explain the lack of balance?

During TES3, we performed a field followup on several types of housing units. We used the results of initial housing unit matching and person matching to select our sample.

TES3 P-sample
- Housing units containing matched people to the surrounding blocks
- Nonmatched Housing Units with Nonmatched People
- Matched units in initial housing unit matching where the census half of the match was deleted in TES Ineligible Clusters
- Control Sample of matched housing units with matched people within the cluster

- Other–Units that did not fall into any of above categories (for example, Conflicting Households, whole household possible matches, noninterviews)

Each of these types of units may have been located either in the cluster, surrounding blocks, or beyond the surrounding blocks. However, the extra matches to the surrounding blocks protected us against an inflated nonmatch rate. The nonmatches may not have matched because the census unit was vacant or missed or the P-sample unit was outside the surrounding blocks.

Chart 2 shows each type of P-sample housing unit that was followed up in TES3 and the effects that the TES3 evaluation could have on the person DSE.

Chart 2–P-sample Units in TES3

P-sample HU Match Status	DSE Person Match Status (after matching)	HU Status after TES3		Person Code after TES3	Results	Implications
		In surrounding blocks	Outside surrounding blocks			
Non-matched Unit	matched to SB	T	T	In surrounding blocks	decrease matches to surrounding blocks	Explain Lack of Balance
Non-matched Unit	not matched	T		Same	No effect	
Non-matched Unit	not matched		T	Outside surrounding blocks	increase M/N_p	Bias
Match to census delete –TES Eligible Clusters	not matched	T	T	In surrounding blocks	increase M/N_p ratio	Bias
	matched to SB	T	T	In surrounding blocks	decrease matches to surrounding blocks	Explain Lack of Balance
Match to census delete – not eligible for TES	not matched	T	T	In surrounding blocks	increase M/N_p ratio	Bias
		in cluster		Match to surrounding blocks	increase matches to surrounding blocks and increase M/N_p ratio	Explain Lack of Balance/ Bias

TES3 E-sample

During TES3, we followed up two types of E-sample housing units. We used the results of the initial housing unit matching and the person matching to select our sample.

- Correctly Enumerated Housing Units or Housing Units with Unresolved Status
- Units Added to the DMAF after January, 2000 Located Outside the Cluster in TES-Ineligible Clusters (referred to as "DMAF Adds")

Like TES2, each of these types of units may have been located either in the cluster, surrounding blocks or beyond the surrounding blocks.

- <u>In the surrounding blocks</u> – If we found a unit in the surrounding blocks during TES2, we increased the number of correctly enumerated people in surrounding blocks from production; therefore, we decreased the measured lack of balance. If the people were already correct enumerations, then we would not change the production CE rate.
- <u>Beyond the surrounding blocks</u> – If we found a unit beyond the surrounding blocks in TES2, we increased the number of production erroneously enumerated people due to geocoding error; the production correct enumeration rate was inflated before the TES2 work.

Chart 3 shows each type of E-sample housing unit that was followed up in TES3 and the effects that the TES3 evaluation could have on the DSE.

Chart 3–E-sample Units in TES3

E-sample HU Match Status	DSE Person Match Status (after matching)	HU Status after TES3 In surrounding blocks	HU Status after TES3 Outside surrounding blocks	Person Code after TES3	Results	Implications
Correctly Enumerated or Unresolved	Correct Enumeration		T	Geocoding Error	decrease CE/N$_e$ ratio	Bias
		T		Surrounding block correct enumeration	increase CE in surrounding blocks	Explain Lack of Bal
DMAF adds –not eligible for TES	Geocoding Error		T	Geocoding Error	no effect	n/a
		T		Surrounding block correct enumeration	increase CE in surrounding blocks; increase CE/N$_e$	Explain Lack of Bal/ Bias

What were the components of balancing in the Targeted Extended Search?

Breaking down the matches to the surrounding block from equation [1] and generating a revised estimate of correct enumerations in the surrounding block to incorporate the units that may contribute to the lack of balance:

$$M_{bal\_p} = \frac{1}{P_{cov}} * (M_{sb} - M_{GI} + M_{del})$$
$$CE_{bal\_e} = CE_{sb} + CE_{EE} + CE_{CE} + CE_{adds} + CE_{UE} - DE_{SB}$$

where

> M_{bal_p}=estimated number of matches to surrounding blocks after TES3
> M_{SB}=production surrounding blocks matches, recalcuated using TES3 weights
> M_{GI}=false surrounding block matches due to A.C.E. geocoding error from TES3
> M_{del}=new surrounding block matches due to not including clusters in TES
> CE_{bal_e}=revised estimate of correct enumerations in surrounding blocks after TES2 and TES3
> CE_{sb}= production correct enumerations in the surrounding block from the original TES sample
> CE_{EE}=correct enumerations in the surrounding block from the housing units coded erroneous enumerations from TES2

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CE_{CE}=correct enumerations in the surrounding block from the housing units coded correct enumerations from TES3

CE_{adds}=correct enumerations due to GE adds, after removing the original imputed correct enumeration probability, if necessary from TES2 and TES3

CE_{UE}=correct enumerations in the surrounding block from the housing units coded unresolved, from TES3

DE_{SB}=new duplicates found in surrounding blocks due to geocoding error

We examined each of these types of units in either TES2 or TES3 to determine if they are located in the surrounding blocks or outside the surrounding blocks.

3. LIMITATIONS

Due to time constraints, we did not perform matching to the surrounding blocks for people in P-sample units initially matched in the initial housing unit matching, where the matching census unit was deleted from the census in TES ineligible clusters. This would increase the matches to the surrounding blocks. In addition, we did not perform a duplicate search in the surrounding blocks on additional correct enumerations we found in the surrounding blocks during TES2 and TES3. This would decrease the correct enumerations in surrounding blocks. Both of these numbers were small in the initial TES.

Any standard errors presented in this paper are estimates and did not take into account all of the phases of A.C.E. sampling.

We considered unresolved cases in both TES2 and TES3 to have been coded correctly in the person matching operations. The unresolved rates for both operations were low (less than 1%). In addition, during TES3, we examined a control sample of units matched within the cluster with matched people; 1.76% of these units were in the surrounding block according to TES3. This represents a small amount of noise in our operation.

4. RESULTS

As we can see from Table 2, the estimated lack of balance was reduced from 2,968,022 to -36,068 as a result of the TES2 and TES3 evaluations. The confidence interval surrounding this point estimate easily included zero. We can conclude that the lack of balance is explainable and due, in large part, to P-sample geocoding error. This pattern held for both update/leave areas and non-update/leave areas.

Table2–Lack of Balance After TES2 and TES3 Results–Weighted Person Counts

	P-sample Person Matches to Surrounding Blocks	E-sample Person Correct Enumerations in Surrounding Blocks	P-sample Coverage	Estimated Lack of Balance		% of M to SB
				Estimate	Std. Err.	
Total	7,650,984*	8,240,161	0.9326	-36,068	838,635	0.40
Non-Update/ Leave	7,266,358	7,844,246	0.9333	-58,751	832,465	0.81
Update/ Leave	384,627	395,915	0.9412	12,745	113,458	3.31

*This included removing people in units located outside the cluster and those in units determined not be housing units.

We wanted to explain the apparent lack of balance of 2,968,022 and determine the effects of our TES processing on our match rates and correct enumeration rates. The table below discusses the effects of geocoding error coupled with the TES2 or TES3 result for a housing unit.

Table 3–Units Incorrectly Included in the Cluster During Initial Housing Unit Phase

Housing Unit Status	Person Status	TES2/3 result	Effect
A.C.E. Geocoding Errors	Matches to SB	Outside Cluster	Explains apparent lack of balance
	Nonmatches	Beyond Surrounding Blocks	Biases the nonmatch rate
E-sample Misclassification	Correct Enumeration	In Surrounding Blocks	Explains apparent lack of balance
	Correct Enumeration	Beyond Surrounding Blocks	Increases the erroneous enumeration rate

In table 4, we see the components of TES2 and TES3 that may contribute to a bias in the DSE. The nonmatches decreased the match rate; the correct enumerations decreased the erroneous enumeration rate. Both of these types of errors would have decreased the DSE.

Table 4--Summary of TES2 and TES3 Results	
Nonmatched people in Nonmatched Housing Units Found beyond the surrounding rings (no matches to the surrounding blocks within the household)	245,926 (81,513) nonmatches
Correct Enumerations Found Beyond the Surrounding Blocks	195,321 (56,106) correct enumerations

5. CONCLUSIONS

As we can see from Table 2, we explained the apparent lack of balance by P-sample geocoding error of matches in the surrounding blocks and by additional E-sample correct enumerations in the surrounding blocks.

However, there were errors that may bias the DSE, as we see in table 4. We found 245,926 nonmatches beyond the surrounding blocks and 195,321 correct enumerations beyond the surrounding blocks. These errors both decreased the DSE.

6. REFERENCES

Beaghen, M. (March, 2001), "Accuracy and Coverage Evaluation: TES Balancing", DSSD Census 2000 Procedures and Operations Memorandum Series, Chapter T-12.

Childers, D. (January 2001), "Accuracy and Coverage Evaluation: The Design Document", DSSD Census 2000 Procedures and Operations Memorandum Series, Chapter S-DT-1.

Navarro, A. and Olson, D. (February, 2001), "Accuracy and Coverage Evaluation: Effect of Targeted Extended Search", DSSD Census 2000 Procedures and Operations Memorandum Series, B-18*.

Appendix

Table A1--Correctly Enumerated People in Housing Units Coded EE During Initial Housing Unit Matching		
Outcome of TES2	**Correctly Enumerated People**	**Percent**
In Surrounding Blocks	208,666	10.6
Outside Search Area	51,240	2.6
Not a Housing Unit	674,432	34.4
In Block Cluster	447,806	22.7
Geography Unresolved	21,951	1.1
Matched	535,512	27.3
Duplicate	23,950	1.2
Total	1,960,536	100.0

Table A2--Results of P-sample TES3 by Type of Housing Unit, Weighted Persons

Classification of Housing Unit	Total Persons (n)	TES3 Result				
		In Cluster	In Surrounding Blocks	Beyond Surrounding Blocks	Not a HU	Unresolved
Total	262,517,237	96.19	2.99	0.10	0.08	0.64
Match to SB	10,911,957	71.31	26.99	0.01	0.21	1.49
Whole Household Nonmatches in nonmatched housing units	5,663,293	85.60	7.09	4.32	0.70	2.30
Matched Housing Unit with Matched People (control sample)	229,678,281	97.70	1.76	0.00	0.03	0.51
Noninterviews and Other P-sample Units*	14,989,494	95.07	2.97	0.00	0.46	1.49
Match to Delete	1,274,211	97.82	2.02	0.16	0.00	0.00

*These include units that were conflicting households, had only possibly matched people, and noninterviews (for example., insufficient information for matching and followup).

Table A3--Results of E-sample TES3 by Type of Housing Unit, Weighted Correct Enumerations

	Total (n)	TES3 Result				
		In Cluster	In Surrounding Blocks	Beyond Surrounding Blocks	Not a HU	Unresolved
People in Housing Units Coded Correct or Unresolved in Initial Housing Unit Matching	4,827,643	90.52	6.74	0.80	0.76	1.18

Table A4--Results of P-sample Cases from TES3–Weighted Nonmatch Person Counts

People in Housing Units Coded during Initial Housing Unit Matching	Initial Person Match Status	Number found in cluster	Number of surrounding block matches due to A.C.E. geocoding error found in surrounding blocks	Number of nonmatches that are outside the cluster due to A.C.E. geocoding error	Number matches within cluster found in surrounding blocks
Nonmatch or match to deleted census unit	nonmatch	5,487,594	n/a	652,986	n/a

Table A5--Results of P-sample Cases from TES3–Weighted Matched Person Counts

People in Housing Units Coded during Initial Housing Unit Matching	Initial Person Match Status	Number found in cluster	Number of surrounding block matches due to A.C.E. geocoding error found in surrounding blocks	Number of nonmatches that should outside the cluster due to A.C.E. geocoding error	Number matches within cluster found in surrounding blocks
Nonmatch	Matched to Surrounding Block	7,499,694	2,766,934	n/a	n/a
Match	Matched within cluster	218,322,201	n/a	n/a	3,986,013 (1.78%)

Table A6--Results of E-sample Cases from TES2 and TES3–Weighted Correct Enumeration Counts

People in Housing Units Coded during Initial Housing Unit Matching	Number of people found outside the surrounding blocks
Total	195,321
Correct Enumeration	74
Erroneous Enumeration	51,240
Unresolved	38,661
Blank (adds coded as geocoding error)	105,346